

ABSTRACT OF THE DISCLOSURE

A device for detecting a timing synchronization, a method thereof, and a communication device using the same. The device for detecting the timing synchronization a timing synchronization detecting unit for outputting a timing synchronization discriminating signal, which corresponds to a difference between samples that are ahead and behind of the input signal by a semi-symbol period, respectively. The device includes a timing error detecting unit for respectively semi-symbol delaying a real number element and an imaginary number element of the input signal, and subtracting the delayed signals from the real number element and the imaginary number element of the input signal, a first power detector for detecting a power from the semi-symbol delayed signals of the input signal that are received; a second power detector for detecting a power from the real number element and the imaginary number element that are received from the timing error detecting unit; and a subtracter for subtracting a value, which is obtained by multiplying the power detected by the second power detector by a predetermined coefficient, from the power detected by the first power detector. As a result, the timing synchronization can be easily detected by using a general device for detecting the timing error.